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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Ehnebuske et al.**

Serial No.: **09/640,513**

Filed: **August 17, 2000**

For: **Method and Apparatus for
Performing Personalization Based on
Classification**

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Group Art Unit: **3622**

Examiner: **Carlson, Jeffrey D.**

**Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450**

**ATTENTION: Board of Patent Appeals
and Interferences**

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APPELLANT'S BRIEF (37 C.F.R. 1.192)

This brief is in furtherance of the Notice of Appeal, filed in this case on May 27, 2004.

The fees required under § 1.17(c), and any required petition for extension of time for filing this brief and fees therefore, are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief is transmitted in triplicate. (37 C.F.R. 1.192(a))

REAL PARTIES IN INTEREST

As reflected in the Assignment recorded on August 17, 2000, at Reel 011166, Frame 0619, the present application is assigned to International Business Machines Corporation, the real party in interest.

RELATED APPEALS AND INTERFERENCES

With respect to other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in the pending appeal, there are no such appeals or interferences.

STATUS OF CLAIMS

Claims 1-21 stand finally rejected as noted in the Final Office Action mailed March 19, 2004.

STATUS OF AMENDMENTS

Applicant's Response to Office Action, transmitted on December 29, 2003 has been entered. Applicants have filed a Response to Office Action along with this appeal brief on July 27, 2004. Applicants understand from a telephone conference with the Examiner that the Response to Office Action filed on July 27, 2004 will be entered.

SUMMARY OF INVENTION

Applicants claim a method, system, and product in a data processing system of creating a personalized content delivery business application.

Claim 1 describes a method in a data processing system that comprises defining one or more classifier objects, defining one or more action objects, and defining at least one selector. The method in the data processing system also comprises receiving a request from a user, invoking a

selector, invoking one of the classifying objects, determining the current classification using user description data that is stored in the system when the user registered with the personalized content delivery business application, the current data processing system settings, and the request, selecting one of the action objects based on the current classification that was determined by the classifying object, and invoking the selected action object by the selector to generate personalized content for the user. The user was already registered with the application.

Claim 6 describes the classifying object being specified to determine a classification in which the user description data is classified. The selector associates the action object based on the classification of the user description data.

Claim 7 describes the classifying object being specified to determine a classification in which the system settings are classified. The selector associates the action object based on both the determination of a classification in which the user description data is classified and the determination of the classification in which the system settings are classified.

Claim 10 describes a method in a data processing system of personalizing content delivery by an application to a user. The method comprises receiving a request from a user. This user is already registered with the application. User description data was stored in the system when the user registered with the application. The method also comprises invoking at least one selector, invoking a classifying object by the selector to determine a current classification, determining the current classification using the user description data, the current data processing system settings, and the request. An action object is selected based on the current classification determined by the classifying object. The selected action object is invoked by the selector to generate personalized content for the user. The classifier object is applied to the user description data. At least one classification of the classifier object is determined in which the user description data is classified. The action object is invoked based on the determination of at least one classification of the classifier object. The action object identifies functions that are to be performed in order to generate personalized content for the user.

Claim 11 describes invoking an Always object that defines an action object that is invoked regardless of the determination of the classification of the classifying object.

Claim 12 describes determining if the user description data is not classified in any of the classification of the classifier, and if the user description data is not classified in any of the classification of the classifier, invoking an action object associated with an Otherwise object that

defines an action object that is to be invoked when the user description data is not classified in any of the classification of the classifier.

Claim 16 describes a computer program product for creating a personalized content delivery business application. The product includes instructions for defining one or more classifier objects, one or more action objects, and at least one selector. The classifier objects contain one or more classifications. The action objects are associated with one or more classifications and identify functions that are performed in order to generate the personalized content. The product includes instructions for the selector invoking the classifier objects and associating the action object based on the classification that is applicable to the current data processing system settings. The product includes instructions for a request being received from a user. The user is already registered with the application. User description data was stored in the system when the user registered with the application. The product includes instructions for invoking the selector and for invoking the classifying object to determine a current classification. The product includes instructions for determining the current classification using the user description data, the current data processing system settings, and the request. The product includes instructions for selecting one of the action objects based on the current classification that was determined by the classifying object. The product includes instructions for invoking the selected action object by the selector in order to generate the personalized content for the user.

Claim 21 describes a data processing system for creating a business application. Claim 21 describes a data processing system that includes a request from a user, at least one selector, a classifying object, and one or more action objects. The user is already registered with the business application. User description data is stored in the system when the user registered with the application. The data processing system includes a CPU that is executing code for invoking the selector. The selector invokes the classifying object in order to determine a current classification. The classifying object determines the current classification using user description data, current data processing system settings, and the request. The selector selects an action object based on the current classification that is determined by the classifying object. The selector invokes the selected action object to generate personalized content for the user. The classifier object contains one or more classifications. The action objects are associated with the classifications and identify functions that are performed in order to generate the personalized content for the user. The selector

identifies the classifier object and associates the action object based on the classification that is applicable to the current data processing settings.

ISSUES

Are the Examiner's rejections of claims 1-15 under 35 U.S.C. § 101; claims 10 and 16 under 35 U.S.C. § 112, second paragraph; and claims 1-21 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,991,735 issued to *Gerace* in view of Objected-Oriented Information Systems published by *Taylor* well founded?

GROUPING OF CLAIMS

For the purposes of this appeal, claims 1-21 stand or fall together as one group.

ARGUMENT

The Examiner rejected claims 1-15 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. The Examiner stated that claims 1 and 10 fail to present an invention within the technological arts. The Examiner rejected claims 10 and 16 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. Specifically, the Examiner states that there is no antecedent basis for the current data processing system settings. Applicants have filed a Response to Office Action along with this appeal brief. Applicants understand from a telephone conference with the Examiner on July 26, 2004, that this Response to Office Action will be entered. Applicants also understand from the Examiner that the amendments to the claims will result in the rejections to the claims under 35 U.S.C. § 101 and 35 U.S.C. § 112, second paragraph, being withdrawn. Therefore, these rejections will not be addressed herein. Further, the appendix hereto which includes the pending claims will reflect the claims after the amendments made in this Response to Office Action filed July 27, 2004.

The Examiner rejected claims 1-21 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,991,735 issued to *Gerace* in view of Objected-Oriented Information Systems

published by *Taylor*. This position is not well founded.

Applicants claim a method of creating a business application. Applicants claim a classifying object that contains one or more classifications, an action object that is associated with a classification and identifies functions that are to be performed in order to generate personalized content for a user, and at least one selector. The selector invokes the classifier object and the action object. The selector invokes these objects based on the classification that is applicable to the current data processing system settings.

A request is received from the user. This user is already registered with the business application. User description data was stored in the system when the user registered with the business application.

The selector is invoked. The selector then invokes the classifying object to determine the current classification. The current classification is determined using the user description data, the current data processing system settings, and the user's request. One of the action objects is selected based on the current classification determined by the classifying object. This selected action object is then invoked by the selector in order to generate personalized content for the user.

Applicants' claims describe a particular combination of features which Applicants believe is patentable over the prior art. In order to render these claims unpatentable, the prior art must not only describe these features, the prior art must teach the particular combination of features as these features interact with each other. The cited prior art, however, does not describe all of the features claimed by Applicants, nor does the cited prior art describe the particular combination and interaction of the claimed features.

Gerace does not teach all of the features claimed by Applicants. *Gerace* does not teach a classifying object, an action object, or a selector. *Gerace* does not teach a classifying object that contains one or more classifications. *Gerace* does not teach an action object that is associated with a classification and that identifies functions that are to be performed to generate personalized content for a user. *Gerace* does not teach a selector that invokes an action object based on the classification that is applicable to the current data processing system settings. *Gerace* does not teach a user already being registered with the business application.

Gerace does not teach the combination and interaction of features as claimed by Applicants. *Gerace* does not teach a selector that invokes a classifying object and that invokes an action

object. *Gerace* does not teach a selector that invokes a classifying object to determine a current classification using user description data, current data processing system settings, and a request received from a user. *Gerace* does not teach selecting an action object based on the current classification determined by the classifying object. *Gerace* does not teach invoking this action object to generate personalized content for the user.

Gerace teaches a program controller that obtains information from an agate data portion and user profiling member, creates and obtains a psychographic profile of the user from the obtained information, and generates and displays appropriate screen views based on the created psychographic profile of the user. The agate portion provides agate information for display. The user profiling member records indications of user response and physical activity with respect to screen views during display of the screen views. See column 3, lines 27-46. Thus, as the user accesses the screens, user activity information is collected and then used to create a psychographic profile of that user. This profile is then used to generate and display an appropriate screen view. Therefore, according to *Gerace*, the screen view is created for a user based on the user's past history of accessing the screens.

When a user first logs onto this program 31, the program generates an initial screen view. As the user makes selections from the screen, the program 31 records these changes and creates a user profile. This profile is based on the user's interaction with the screen over a period of time. See column 4, lines 28-57. "After multiple sessions, a pattern of the user's viewing actions or viewing habits is obtained, from the recorded activity." Column 4, lines 44-46. The program then creates a profile of this user based on the user's viewing actions/habits over time. A customized Home Page is then created for that user based on that user's habits. "That is, both the subject matter/content and presentation of advertisements are able to be customized to the end user's preferences due to the information tracked and recorded (i.e., the created user profile) by program 31." Column 4, lines 61-64.

Program 31 includes a program controller 79 which is a series of routines or methods. The program controller responds to a user logging in to determine whether the user has logged in before. Column 5, lines 16-26. If this is a new user who has not logged in before, the program controller 79 obtains initial, non-customized, agate information to display the Home Page to the user. Column 5, lines 27-35.

Gerace describes a user computer object 37b that provides an indication of the limitations and capabilities of the user's computer system. The object might include whether the user's system provides audio and/or video display, and what Web browser software is utilized by the user's system. Figure 3c provides information about this object. See column 6, lines 39-48. When a previous user logs on, the Web server 27 locates that user's cookie and queries the user object 37a, user computer object 37b, and user interface object 37c to identify who the user is and what that user's preferences are. See column 16, lines 45-55.

Applicants claim invoking a selector. The selector then invokes a classifying object to determine a current classification using user description data, the current data processing system settings, and a user's request. A selected action object is then invoked by the selector to generate personalized content for the user. The action object is selected based on the current classification determined by the classifying object.

The Examiner states that *Gerace* teaches programming modules, subroutines, methods, objects, and attributes. Applicants agree that *Gerace* teaches programming modules, subroutines, methods, objects, and attributes. However, *Gerace* does not teach the particular combination of features claimed by Applicants or the particular interaction among the claimed features.

For example, Applicants claim a selector invoking a classifying object to determine a current classification. *Gerace* teaches a user logging onto program 31 which tracks a user's particular use of the screen and its data. The program 31 then generates a customized Home Page upon subsequent log-ins by that same user. *Gerace* does not teach a selector that invokes a classifying object to determine the current classification. If the program 31 is analogous to the classifying object, there is no selector that invokes the program 31.

Further, this same selector also invokes a selected action object that generates the personalized content for the user. *Gerace* does not describe anything that teaches a selector that invokes the program 31 and that also invokes an action object that generates the personalized content for the user. *Gerace* teaches the system creating a customized Home Page that the program 31 displays.

Applicants claim the classifying object determining a current classification using the user description data, current data processing system settings, and the request received from the user. Nothing in *Gerace* reads on this combination of features. *Gerace* does teach user computer object 37b. However, user computer object 37b is used to identify who the user is and what that

user's preferences are. User computer object 37b is not used along with user description data that was collected when the user registered with the application and the user's request. The user computer object 37b is not used with user description data and the user's request to determine a current classification. The user computer object 37b is not used with user description data and the user's request to determine a current classification by a classifying object that was invoked by a selector. The user computer object 37b is not used with user description data and the user's request to determine a current classification by a classifying object that was invoked by a selector where the current classification is used to select an action object.

Gerace does not teach using current data processing system settings by a classifying object to determine a current classification. *Gerace* teaches a user computer object 37b. This user computer object is not used to determine a current classification. The web server 27 uses the user computer object 37b, user object 37a, and user interface object 37c to identify who the user is and what that user's preferences are when the user logs in. Column 16, lines 45-55. Thus, *Gerace* does not teach current data processing settings being used by a classifying object to determine the current classification. The user computer object 37b is not used by a classifying object to determine the current classification. The user computer object 37b is used by the web server 27.

The web server 27 is not a classifying object. Applicants claim the classifying object being invoked by the selector. The web server 27 is not a classifying object that can be invoked by a selector.

Further, the user computer object 37b is not used along with the user's request and user description data to determine the current classification. The user computer object 37b is used with the user object 37a and user interface object 37c to identify a user and that user's preferences. A user's identity and preferences are not a "current classification" on which an action object is invoked.

Gerace does not teach user description data as claimed by Applicants. *Gerace* does not teach a user registering with an application causing user description data to be stored. *Gerace* teaches the program 31 monitoring the user's use of the system to determine the profile of the user. This profile is later used by the program 31 when the user subsequently logs on to the system. Thus, *Gerace* does not teach the process of registering. *Gerace* teaches away from registering. There is no need in *Gerace* for a user to register because *Gerace* will collect data about the user as the

user uses the system. In *Gerace*, the first time the user logs on, the user is presented with a default screen. It is only during subsequent log-ins that the user might receive a customized screen. Using Applicants' claimed features, the first time a user uses the system, the user will receive personalized content because the user has already registered with the application. Thus, *Gerace* does not teach user description data as claimed by Applicants.

The Examiner states that *Gerace* does not provide background on the principles and advantaged of object oriented programming and uses *Taylor* to supply teachings regarding basic features and advantages of object oriented programming. Although *Taylor* does describe basic object oriented programming, it does not provide teachings that describe a classifying object, an action object, or a selector as claimed by Applicants; a classifying object that contains one or more classifications; an action object that is associated with a classification and that identifies functions that are to be performed to generate personalized content for a user; a selector that invokes an action object based on the classification that is applicable to the current data processing system settings; a user already being registered with the business application; a selector that invokes both a classifying object and an action object; a selector that invokes a classifying object to determine a current classification using user description data, current data processing system settings, and a request received from a user; selecting an action object based on the current classification determined by the classifying object; or invoking this action object to generate personalized content for the user.

Claim 6 describes the classifying object being specified to determine a classification in which the user description data is classified. The selector associates the action object based on the classification of the user description data. Claim 7 describes the classifying object being specified to determine a classification in which the system settings are classified. The selector associates the action object based on both the determination of a classification in which the user description data is classified and the determination of the classification in which the system settings are classified.

Gerace does not describe, teach, or suggest these features. The Examiner states that *Gerace* teaches a user profile which the system uses to present customized content. The Examiner also states that this functionality inherently relies on both user data and the system data. However, this is not what is claimed by Applicants. Applicants claim user description data that is stored in the system when the user registered with the application. As discussed above, *Gerace* does not

teach this user description data. Further, Applicants claim the classifying object being specified to determine a classification in which the user description data is classified. The selector then associates an action object based on the classification of the user description data. Thus, the user description data is classified in some way. Nothing in *Gerace* describes classifying the user profile.

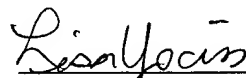
Claim 7 describes the classifying object being specified to determine a classification in which the system settings are classified. The selector associates the action object based on both the determination of a classification in which the user description data is classified and the determination of the classification in which the system settings are classified. Again, the Examiner states that *Gerace* teaches a user profile which the system uses to present customized content and that this functionality inherently relies on both user data and the system data. However, the user profile and any system data is not what is taught by Applicants. The user profile and any system data does not teach the classifying object being specified to determine a classification in which the system settings are classified, and the selector associating the action object based on both the determination of a classification in which the user description data is classified and the determination of the classification in which the system settings are classified.

Claim 11 describes invoking an Always object that defines an action object that is invoked regardless of the determination of the classification of the classifying object. Claim 12 describes determining if the user description data is not classified in any of the classification of the classifier, and if the user description data is not classified in any of the classification of the classifier, invoking an action object associated with an Otherwise object that defines an action object that is to be invoked when the user description data is not classified in any of the classification of the classifier.

The Examiner states that it would have been obvious to have always defined an action regardless of the user, such as by putting a universal navigation menu on the user pages. This is not what is claimed by Applicants. Applicants claim an action object that is invoked regardless of the determination of the classification of the classifying object. *Gerace* does not teach a classifying object making a determination. Thus, *Gerace* does not teach an action object that is invoked regardless of the determination of the classification of the classifying object. Further, *Gerace* does not teach determining a classification for the user profile. Thus, *Gerace* does not teach determining if the user description data is not classified in any of the classification of the classifier, and if the user description data is not classified in any of the classification of the

classifier, invoking an action object associated with an Otherwise object that defines an action object that is to be invoked when the user description data is not classified in any of the classification of the classifier.

Because none of the claimed features or the claimed combination and interaction of these features is taught be the combination of *Gerace* and *Taylor*, the combination of the cited prior art does not render Applicants' claims unpatentable. Therefore, Applicants' claims are believed to be patentable over the prior art.



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APPENDIX OF CLAIMS

The text of the claims involved in the appeal reads:

1. A method in a data processing system of creating a personalized content delivery business application for personalizing content delivery to a requesting user, comprising:

defining one or more classifier objects, the classifier objects containing one or more classifications;

defining one or more action objects, the one or more action objects being associated with the one or more classifications and identifying functions that are to be performed in order to generate personalized content for said user;

defining at least one selector for invoking the one or more classifier objects and for invoking the one or more action objects based on the one or more classifications being applicable to current data processing system settings;

receiving, within said data processing system, a request from said user, said user being registered with said application, user description data being stored in said system when said user registered with said application;

invoking, within said data processing system, said at least one selector;

invoking, within said data processing system, one of said classifying objects by said at least one selector to determine a current classification;

determining, by said data processing system, said current classification using said user description data, said current data processing system settings, and said request;

selecting, by said data processing system, one of said action objects based on said current classification determined by said one of said classifying objects; and

invoking, within said data processing system, said selected action object by said selector to generate personalized content for said user.

2. The method of claim 1, wherein the one or more classifier objects are reusable with a plurality of different selectors.
3. The method of claim 1, wherein the one or more action objects are reusable with a plurality of different selectors.
4. The method of claim 1, wherein the steps of defining are performed using a personalization tool.
5. The method of claim 4, wherein the personalization tool provides a tree-like display of the one or more classifier objects, the one or more action objects and the at least one selector.
6. The method of claim 1, wherein the one or more classifier objects are specified to determine at least one classification in which said user description data is classified, and wherein the at least one selector associates one or more action objects based on the classification of the user description data.
7. The method of claim 6, wherein the one or more classifier objects are specified to determine at least one classification in which said system settings are classified, wherein the at least one selector associates the one or more actions based on both the determination of at least

one classification of the classifier object in which the user description data is classified and the determination of at least one classification of the classifier object in which the system settings are classified.

8. The method of claim 1, wherein the one or more action objects are specified to perform at least one function for personalizing information content to be delivered to a user.

9. The method of claim 8, wherein the at least one function includes at least one of selecting and formatting information for display to the user.

10. A method in a data processing system of personalizing content delivery by an application to a user, comprising:

receiving, within said data processing system, a request from said user, said user being registered with said application, user description data being stored in said system when said user registered with said application;

invoking, within said data processing system, said at least one selector;

invoking, within said data processing system, one of said classifying objects by said at least one selector to determine a current classification;

determining, by said data processing system, said current classification using said user description data, current data processing system settings, and said request;

selecting, by said data processing system, one of multiple action objects based on said current classification determined by said one of said classifying objects;

invoking, within said data processing system, said selected action object by said selector to generate personalized content for said user;

applying, by said data processing system, said classifier object to said user description data;

determining, by said data processing system, at least one classification of the classifier object in which the user description data is classified; and

invoking, within said data processing system, said action object based on the determination of at least one classification of the classifier object, said action object identifying functions that are to be performed in order to generate personalized content for said user.

11. The method of claim 10, further comprising:

invoking at least one Always object, the Always object defining at least one action object that is to be invoked regardless of the determination of the at least one classification of the classifier object.

12. The method of claim 10, wherein determining at least one classification of the classifier object in which the user description data is classified includes:

determining if the user description data is not classified in any of the at least one classification of the classifier; and

if the user description data is not classified in any of the at least one classification of the classifier, invoking at least one action object associated with an Otherwise object, the Otherwise object defining at least one action object that is to be invoked when the user description data is not classified in any of the at least one classification of the classifier.

13. The method of claim 10, further comprising determining at least one classification of the classifier object in which system settings are classified, wherein invoking said action object includes invoking said action object based on both the determination of at least one classification of the classifier object in which the user description data is classified and the determination of at least one classification of the classifier object in which the system settings are classified.

14. The method of claim 10, wherein the at least one action object performs at least one function for personalizing information content to be delivered to a user.

15. The method of claim 14, wherein the at least one function includes at least one of selecting and formatting information for display to the user.

16. A computer program product in a computer readable medium in a data processing system for creating a personalized content delivery business application for personalizing content delivery to a requesting user, comprising:

instructions for defining one or more classifier objects, the classifier objects containing one or more classifications;

instructions for defining one or more action objects, the one or more action objects being associated with the one or more classifications and identifying functions that are to be performed in order to generate personalized content for said user;

instructions for defining at least one selector for invoking the one or more classifier objects and for associating the one or more action objects based on the one or more classifications being applicable to [[said]] current data processing system settings; instructions

for receiving a request from said user, said user being registered with said application, user description data being stored in said system when said user registered with said application;

instructions for invoking said at least one selector;

instructions for invoking one of said classifying objects by said at least one selector to determine a current classification;

instructions for determining said current classification using said user description data, said current data processing system settings, and said request;

instructions for selecting one of said action objects based on said current classification determined by said one of said classifying objects;

instructions for invoking said selected action object by said selector to generate personalized content for said user.

17. The computer program product of claim 16, wherein the one or more classifier objects are reusable with a plurality of different selectors.

18. The computer program product of claim 16, wherein the one or more action objects are reusable with a plurality of different selectors.

19. The computer program product of claim 16, wherein the computer program product is a personalization tool.

20. The computer program product of claim 19, further comprising fourth instructions for providing a tree-like display of the one or more classifier objects, the one or more action objects and the at least one selector.

21. A data processing system for creating a personalized content delivery business application for personalizing content delivery to a requesting user, comprising:

- a request from said user, said user being registered with said application, user description data being stored in said system when said user registered with said application;

- said data processing system including a CPU executing code for invoking at least one selector;

- said at least one selector for invoking one of said classifying objects by said at least one selector to determine a current classification;

- said one of said classifying objects for determining said current classification using said user description data, said current data processing system settings, and said request;

- said at least one selector for selecting one of said action objects based on said current classification determined by said one of said classifying objects;

- said at least one selector for invoking said selected action object to generate personalized content for said user;

- the classifier objects containing one or more classifications;

- the one or more action objects being associated with the one or more classifications and identifying functions that are to be performed in order to generate personalized content for said user;

said at least one selector for identifying the one or more classifier objects and for associating the one or more action objects based on the one or more classifications being applicable to said current data processing system settings.